

**AMENDMENTS TO THE CLAIMS**

1. Claims 1 – 54. (Cancelled)
55. (Previously presented) A diesel fuel comprising a base fuel and at least one additive wherein the additive comprises:
  - a plant oil extract derived from grain;
  - a carotenoid; and
  - a thermal stabilizer.
56. (Previously presented) The diesel fuel of claim 55, wherein the grain is selected from the group consisting of fescue, clover, wheat, barley, oats, rye, sorghum, flax, triticale, rice, corn, spelt, millet, amaranth, buckwheat, quinoa, kamut and teff.
57. (Previously presented) The diesel fuel of claim 55 wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.
58. (Previously presented) The diesel fuel of claim 55, wherein the thermal stabilizer is selected from the group consisting of vegetable oils, nut oils, animal oils and mixtures thereof.
59. (Previously presented) The diesel fuel of claim 55 wherein the plant oil extract is derived from barley and the carotenoid is  $\beta$ -carotene.
60. (Previously presented) The diesel fuel of claim 55 wherein the thermal stabilizer is meadowfoam oil.
61. (Previously presented) The diesel fuel of claim 55 further comprising a diluent.
62. (Previously presented) The diesel fuel of claim 55 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane,

octanes, nonanes, diesel fuel, jet fuel, gasoline, 2 cycle oil and resid fuel and mixtures thereof.

63. (Currently amended) The diesel fuel of claim 55 further comprising at least one additive ~~selected from~~consisting of the group selected from octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
64. (Canceled)
65. (Previously presented) A diesel fuel comprising a base fuel and at least one additive wherein the additive comprises:
  - a hydrophobic plant oil extract;
  - a carotenoid; and
  - a thermal stabilizer selected from the group consisting of peanut oil, cottonseed oil, rape seed oil, macadamia oil, avocado oil, palm oil, palm kernel oil, meadowfoam oil, castor oil and mixtures thereof.
66. (Previously presented) The diesel fuel of claim 65 wherein the plant oil extract is derived from a member of the Leguminosae family.
67. (Previously presented) The diesel fuel of claim 65 wherein the plant oil extract is derived from grain.
68. (Previously presented) The diesel fuel of claim 65 further comprising a diluent.

69. (Previously presented) The diesel fuel of claim 65 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, diesel fuel, jet fuel, gasoline, 2 cycle oil and resid fuel and mixtures thereof.
70. (Currently amended) The diesel fuel of claim 65 further comprising at least one additive ~~selected from~~ consisting of the group selected from octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
71. (Previously presented) The diesel fuel of claim 65, wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.
72. (Previously presented) The diesel fuel of claim 65 wherein the plant oil extract is barley oil extract, the carotenoid is  $\beta$ -carotene.
73. (Previously presented) A diesel fuel comprising a base fuel and at least one additive wherein the additive comprises:
  - a plant oil extract selected from the group consisting of hops oil extract, fescue oil extract, barley oil extract, green clover oil extract, wheat oil extract and mixtures thereof;
  - a carotenoid; and
  - a thermal stabilizer.
74. (Previously presented) The diesel fuel of claim 73 wherein the carotenoid is selected from the group consisting of  $\beta$ -carotene,  $\alpha$ -carotene, lycopene, leutin, betatene and mixtures thereof.

75. (Previously presented) The diesel fuel of claim 73, wherein the thermal stabilizer is selected from the group consisting of vegetable oils, nut oils, animal oils and mixtures thereof.
76. (Previously presented) The diesel fuel of claim 73 wherein the plant oil extract is derived from barley and the carotenoid is  $\beta$ -carotene.
77. (Previously presented) The diesel fuel of claim 73 wherein the thermal stabilizer is meadowfoam oil.
78. (Previously presented) The diesel fuel of claim 73 further comprising a diluent.
79. (Previously presented) The diesel fuel of claim 73 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, diesel fuel, jet fuel, gasoline, 2 cycle oil and resid fuel and mixtures thereof.
80. (Currently amended) The diesel fuel of claim 79 further comprising at least one additive selected from the group ~~selected from~~ consisting of octane improvers, cetane improvers, detergents, corrosion inhibitors, metal deactivators, ignition accelerators, dispersants, anti-knock additives, anti-run-on additives, anti-pre-ignition additives, anti-misfire additives, anti-wear additives, antioxidants, demulsifiers, carrier fluids, solvents, fuel economy additives, emission reduction additives, lubricity improvers, oxygenates and mixtures thereof.
81. (Canceled)
82. (Previously presented) A diesel fuel additive comprising:  
a plant oil extract derived from barley;

β-carotene; and  
a thermal stabilizer.

83. (Previously presented) The additive of claim 82 wherein the thermal stabilizer comprises meadowfoam oil.
84. (Previously presented) The additive of claim 82 further comprising a diluent.
85. (Previously presented) The additive of claim 82 further comprising a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, diesel fuel, jet fuel, gasoline, 2-cycle oil, resid fuel and mixtures thereof.
86. (Canceled)
87. (Previously presented) A diesel fuel additive comprising:
  - a hydrophobic plant oil extract;
  - a carotenoid;
  - a thermal stabilizer selected from the group consisting of peanut oil; cottonseed oil; rape seed oil; macadamia nut oil; avacado oil; palm oil; palm kernel oil, meadowfoam oil; castor oil and mixtures thereof; and
  - a solvent selected from the group consisting of toluene, benzene, o-xylene, m-xylene, p-xylene, cyclohexanes, hexane, octanes, nonanes, diesel fuel, jet fuel, gasoline, 2-cycle oil, resid fuel, and mixtures thereof.
88. (Canceled)
89. (Canceled)
90. (Previously presented) The additive of claim 87 wherein the plant oil extract is barley oil extract and the carotenoid is β-carotene.

91. (Previously presented) The additive of claim 87 further comprising meadowfoam oil.
92. (New) A diesel fuel additive comprising  
barley oil extract;  
β-carotene; and  
a thermal stabilizer.
93. (New) The diesel fuel additive of claim 92 wherein the thermal stabilizer comprises meadowfoam oil.
94. (New) A diesel fuel additive comprising a plant oil extract selected from the group consisting of hops oil extract, fescue oil extract, barley oil extract, green clover oil extract, a heat oil extract and mixtures thereof;  
a carotenoid;  
a thermal stabilizer; and  
a solvent.
95. (New) The additive of claim 94 wherein the solvent is selected from the group consisting of toluene, benzene, O-xylene, m-xylene, p-xylene, cyclohexanes, hexanes, octanes, nonanes, diesel fuel, jet fuel, gasoline, two-cycle oil, resid fuel and mixtures thereof.
96. (New) A diesel fuel additive comprising:  
a barley oil extract;  
β-carotene;  
a thermal stabilizer selected from the group consisting of peanut oil, cotton seed oil, rape seed oil, macadamia nut oil, avocado oil, palm oil, palm kernel oil, meadowfoam oil, castor oil and mixtures thereof; and a diluent.